

UNIVERSITY OF  
PHYSICAL EDUCATION

# Doctoral School of Sport Sciences

## **TRAINING PROGRAMME**



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### I. DATASHEET

1. *Name of the doctoral school: Doctoral School of Sports Sciences*
2. *Academic level and professional qualifications to be obtained at the Doctoral School as printed in the diploma:*
  - academic level: Doctor of Philosophy (abbreviated: PhD) degree
  - field of science: Medicine
  - academic discipline: Sports Sciences
3. *Training field:* sports sciences
4. *Duration of the training programme:* 2 + 2 semesters
5. *Number of credits to be earned for obtaining the degree:* 240 credits
6. *The aim of the doctoral training programme and professional competencies:*

#### *The aim of the training:*

The doctoral training is the highest level of university education aimed at preparing doctoral students for the first academic degree, the doctoral degree.

During the doctoral training programme, the doctoral student acquires the ability to cultivate the academic discipline of sports science, they acquire a high level of academic knowledge and become able to apply independent scientific methods, which are demonstrated by academic publications, lectures and the doctoral dissertation.

The aim of the doctoral training programme is to train highly qualified specialists and researchers who are capable of independent research work, who are able to come to new scientific results and apply them in practice.

**a) Knowledge**

- they know the general laws of the sports sciences
- they know the general and specific characteristics, results, directions and contexts of their own research field within the sports sciences
- they know the most important theses of the related fields
- they are familiar with the domestic and international literature of the research field
- they know the research methodology of their research field
- they know the contexts, theories and conceptual systems of their field
- they know how to handle data and results obtained during research, they have the knowledge necessary for evaluation and communication

**b) Abilities**

- they are able to perform creative analysis within their research field, to formulate relations in a new way, to create models
- they are able to perform evaluative and critical activities
- they are able to organize and implement work processes independently in their field
- they are able to apply problem solving methods in their field
- they are able to identify the professional problems of their field and provide a practical and theoretical background to the solution thereof
- they are able to connect information a way apart in the field and to discover the connections between them
- they are able to identify essential aspects
- they are capable of professional critical analysis and evaluation
- they are able to transfer professional knowledge to peers and lay people
- they are able to communicate professionally both orally and in writing, even internationally
- they are able to transfer and communicate their professional results

**c) Attitude**

- creative, proactive, problem recognizing and problem solving
- decisive
- they strive to formulate scientific questions
- they are open to learning about new methods, new research fields and to incorporate them into their own research
- they are open-minded, free from professional prejudice
- they accept valid criticisms, professional arguments of others
- they are open to professional collaborations
- they adhere and make others adhere to research ethics rules

**d) Autonomy and Responsibility**

- they have a high degree of independence in elaboration of professional issues and in their professional views
- they assume the responsibility of addressing ethical questions raised by professional questions
- they are imbued with responsible, ethical thinking based on their expertise in all their activities

## II. THE TRAINING SYSTEM

### 1. The training system

Prospective doctoral students with a university degree (Master - MSc degree in cyclical training) or in other master's degree courses who are not more than 6 months ahead of their MSc / diploma are expected to apply. Even in the case of a successful admission interview, you can only enrol in the Doctoral School after obtaining a diploma required for the training.

During the admission procedure, but no later than by the enrolment, the languages required for the training and to be acquired by the submission of the dissertation must be established. The first foreign language can only be one of the world languages as defined by the EDT. Language proficiency can be proven by an at least a B2 level complex state-recognized foreign language certificate or equivalent document. For applicants in the foreign language training, an English language proficiency level for a successful completion of the training and research is required, which is assessed by the entrance examining board.

In the recruitment period, you can submit your application by indicating a topic approved and signed by an announced thesis supervisor or a prospective supervisor.

In the admission procedure, the applicant's previous results and the knowledge and aptitude demonstrated during the admission interview is evaluated. Advantages: experience gained in scientific work, lectures, publications, appropriate research work plan, a high-level knowledge of a foreign language necessary for the professional work, outstanding study results. In the evaluation, the candidate can receive a maximum of 60 points.

a) The evaluation of previous results consists of three parts. Including: (A1) the average of university studies grades, (A2) evaluation of previous scientific work and (A3) other achievements (foreign language certificate, scientific study trip abroad, outstanding profession-specific performance). A maximum of 28 points can be awarded in total.

b) In the admission interview (maximum 32 points), the general level of professional knowledge and aptitude, in the written examination (maximum 10 points) the special, topic-oriented level of knowledge and aptitude (maximum 22 points) is evaluated.

At the end of the fourth semester, the doctoral student takes a comprehensive examination, the successful completion of which is a prerequisite for the start of the second training phase (research and dissertation phase - doctoral procedure). The doctoral student must submit a doctoral dissertation as specified in the Doctoral Regulations within three years from the comprehensive examination. Obtaining a doctoral degree is part of the second two-year phase (so-called research and dissertation) of the doctoral training programme.

The *minimum* scientific publication requirements are determined by disciplines. The publication requirements must be met by academic publications relating to the topic of the dissertation. Instead of letters of acceptance, only academic publications printed and published, or marked with a DOI ID that can be retrieved at [dx.doi.org](http://dx.doi.org) are accepted. Meeting these conditions in itself is not a guarantee for obtaining a degree, the decision of the Dissertation Review Committee and the EDT is based on the opinions formed in the reviews and critiques.

## **2. Organisation of the training programmes**

In the Doctoral School of the University of Physical Education, the organized training is available in the form of Hungarian state-funded, other grant-funded, and self-financed forms, in full-cycle training (full-time and part-time correspondence based).

Students enrolled in organised training (doctoral students) are granted student status by the University and become subjects to the provisions of the university regulations accordingly. The work of the doctoral student is supervised by a thesis supervisor appointed by the EDT.

The main form of the organized training is in form of courses consisting of lectures and practice. The courses shall be publicly advertised and made available to all EDI students at <http://tf.hu/>. The amount of work done in the course can be measured in study credits.

Upon completion of the doctoral student's study obligations, at the end of their last active semester, they obtain a pre-degree certificate (absolutorium) certifying that the candidate has fulfilled their study obligations in the doctoral training programme. All students participating in organized training - financed by the Hungarian state or by other grants, or self-financed - must meet the same conditions in order to obtain a pre-degree certificate (absolutorium).

In the organized training of the Doctoral School, the training period of 2 + 2 years (8 semesters) means the period of time available for the fulfilment of the study obligations, the performance of the research work, and the disbursement of the doctoral scholarship. The training cycle may be shorter than five semesters only in exceptionally justified cases. The student status of the doctoral student participating in the organized training shall be terminated, with the exception of the duration of the suspension specified in these Regulations:

- if the doctoral student fails to pass the comprehensive examination, on the day of the failure to do so or the failure to fulfil the obligation;
- in the doctoral training programme, on the last day of the semester in which the student has obtained the pre-degree certificate (pass);
- at the end of the eighth semester of the doctoral training programme for which the student has enrolled.

The doctoral student can also participate in the training in the form of a uniquely tailored study arrangement.

## **3. Interoperability**

Transfer from another doctoral school is only possible on the proposal of the Council of the Doctoral School of Sports Sciences by the decision of the University Doctoral Council.

#### **4. Quality Policy**

The most important achievement of the operation of the Doctoral School is the weight of the academic degree that students can obtain. Therefore, the evaluation of the dissertation and the underlying academic publications is perhaps the most important quality assurance procedure. Due to the importance of this task, the Doctoral School has a Review and Quality Control Committee (VMB), whose main task is to establish Scientometric requirements and formal requirements related to the dissertation with regard to the academic discipline and then to consistently check this system of requirements for all graduates. In order to ensure a uniform evaluation, even before sending it to the invited official opponents, the VMB carefully reviews and judges the submitted dissertations, the attached publications, and gives opinions on the appointed opponents and the members of the Dissertation Review Committee. The official critique and then the defence can only take place if the VMB issues a positive preliminary opinion assisted by the Library's checking work.

At the University of Physical Education, the authenticity and impact of the publications is checked by the Library of the University of Physical Education, an organization independent of both the candidate and the programme, and thus able to give an objective professional review of the candidate's publication activity.

The preliminary opinion can certainly be negative as well, in which case the candidate is obliged to rewrite the dissertation in accordance with the proposal, or eventually to prepare additional publications. In some cases, the VMB reveals minor deficiencies that can be remedied without a new procedure. As a result of years of practice, we are able to save our students from serious criticism in the public disputation and avoid negative opponent's opinions.

Another important quality assurance factor for the quality of the dissertations and publication activity is the workplace defence. Workplace defence shall take place in the case of all dissertations and the minutes shall be attached to the documents submitted to the VMB. Thus, the narrow professional circle, the staff of the research centre, can assist the candidate in preparing the final form of the dissertation in a way which allows criticism to be expressed and shortcomings revealed without the risk of public embarrassment. The professionalism of the workplace defence is strengthened by the presence of at least five professionals with academic degree. In order to speed up the procedure, there is a regular need to abolish the institution of the workplace defence, but we will withstand the attempt to weaken the significance of this old tradition. Our Doctoral Regulations, valid from September 1, 2016, already require the invitations of two pre-opponents and the dissertation can be submitted for preliminary critique only upon confirmation by the chairman of the workplace defence on making the corrections proposed at the workplace defence.

We have introduced a system of profession-specific requirements, which differentiates between the field and the branch of science as well as the disciplines. In the field of social sciences, where Scientometric evaluation by impact factor is not relevant, we have introduced publication points. It leads often to misunderstandings whether to interpret the requirement according to the name of the programme or based on the scientific work actually performed. Obviously, the requirement can only be interpreted on the basis of the classification of the research work actually carried out,

as only this method makes it possible to take into account the specific publication possibilities of the individual fields. This is the reason of the careful scrutiny of the actual content of the dissertation and the academic publications during the preliminary critique, as otherwise the results achieved would be judged on the basis of unfairly severe or even unreasonably mild requirements for graduates working in border areas.

The Doctoral Council shall decide whether to submit the dissertation to opponents or not. When making this decision, they rely on the preliminary opinion of the Review and Quality Control Committee, which examines all formal and administrative conditions (including compliance with the publication requirements). Thus, the evaluation of the professional merit of the dissertation remains primarily for the opponents. The Scientometric evaluation of the publications is no longer the task of the opponents. (Of course, it may be an opponent's task to filter out false or fabricated, possibly plagiarized academic publications.)

The disputation of the doctoral dissertation is open to the public; the result of the disputation (the defence) is also published. The decision of the Doctoral Council on awarding the degree is also made public at the University.

Student's work is evaluated in several of cases. Some form of accountability in the courses is unavoidable, credit points cannot be awarded otherwise. In case of an unsatisfactory performance, study credit points cannot be approved. The student and their thesis supervisors are obliged to report annually on the results of the work done.

Since the key factor in the successful work of PhD students is the selection of their thesis supervisors, we take special care in accrediting new thesis supervisors. A researcher with an academic degree can only apply for position of a thesis supervisors if they meet several requirements. The most important of these is active publishing, at least at the level that is expected from a student entrusted with the care of the thesis supervisor. In addition, it must be proved that the prospective thesis supervisor has the scientific background that underpins the scientific work of the PhD student as well as a well-formulated topic plan and topic description. The accreditation procedure is carried out first by the Doctoral School Council and then by the University Doctoral Council. The same bodies are entitled to withdraw the accreditation of a topic from a researcher who is constantly unable to demonstrate an adequate level of scientific activity or does not participate effectively in the training of students. Topic accreditation can take place primarily before the admission, but the DIT and EDT are ready to evaluate applications submitted throughout the year. The importance of the topic accreditation is underlined in particular by the fact that the financial support of the student's research work can be spent jointly by the student and the supervisor, within the limits set by economic regulators.

Accreditation and quality control of the programmes are the responsibilities of the Doctoral School and the University Doctoral Council. An important task of the Council is to find a balance between enlarging the list of topics and involving new training places. Therefore, to launch a new programme, the initiator of the new programme must first outline the available human resources and the possible topics. The head of the Doctoral School shall examine the submitted proposal and the new program can only be developed in detail if they issues a statement of acceptance on

the fact that there are no parallels between the previously approved programmes and the new one. Subsequently, the President of the University Doctoral Council shall invite critics to scrutinize the new program in terms of scientific value, training capacity, and originality. The University Doctoral Council decides on the adoption of the new program in the light of these opinions. If the names of thesis supervisors or lecturers who have already been involved in other programs appear in the new program, they are requested to quit the older program to join the new one.

Quality assurance aspects related to the admission of students, the official critique of the dissertations and the conduct of the defence procedure are detailed in the Doctoral Regulations of the University of Physical Education.

## **5. Training development policy**

The Doctoral School considers the continuous renewal of training programmes, research topics and courses to be important tasks.

We strive to strengthen the international visibility of the doctoral training programmes of the University of Physical Education and the results achieved by the PhD students participating in the training (publications in English, website, participation in international PhD events).

An important task for the upcoming period is to increase the number of foreign students participating in the English-language doctoral training programmes. In order to achieve this, in addition to the tasks enhancing the international presence of the Doctoral School, increasing the number of English-language courses and the introduction of other methods (e.g. offering a scholarship) seems necessary. An important task is to emphasize the elements of R & D & I in training, as well as strengthening cooperation with prestigious European higher education institutions.

The Doctoral School intends to continuously improve its quality assurance system and attaches great importance to all activities that help to achieve the goals by improving quality and quality assurance.



### III. CURRICULUM OF THE TRAINING PROGRAMME

COURSES	SEMESTER 1-4.		total hours
	number of hours	credit	
COMPULSORY COURSES IN SOCIAL SCIENCES			
Filozófia	30	2	30
Tudományelmélet	15	1	15
Könyvtárinformatika, hogyan írjunk publikációt?	45	3	45
COMPULSORY ELECTIVE COURSES IN SOCIAL SCIENCES			
Sportpedagógia I.	30	2	30
Sportpedagógia II.	15	1	15
Sport a jelenkori társadalomban I.	30	2	30
Sport a jelenkori társadalomban II.	15	1	15
Sport in Contemporary Society I.	30	2	30
Sport in Contemporary Society II	15	1	15
COMPULSORY COURSES IN SOCIAL SCIENCES			
Sportélettan I.	30	2	30
Sportélettan II.	30	2	30
Sportphysiology I.	30	2	30
Sportphysiology II.	30	2	30
Research Methods	26	2	26
Kutatásmódszertan	26	2	26
COMPULSORY ELECTIVE COURSES IN NATURAL SCIENCES			
Könyvtárinformatika, hogyan írjunk publikációt?	45	3	45
Sporttáplálkozás	30	2	30
Sport Nutrition	30	2	30
OPTIONAL COURSES			
Testértelmezések a filozófiában és pszichológiában	30	2	30
Európai Unió Sportpolitikája	15	1	15
Sportmenedzsment tudományos megközelítésben	30	2	30

The Scientific Approach of the Sport Management	30	2	30
Sportpszichológia	30	2	30
Sport Psychology	30	2	30
Versenyképesség, szervezeti kultúra és kormányzás – Sportágazati megoldások	15	1	15
Competitiveness, Organizational Culture and Governance – Sport Sector Solutions	15	1	15
Fizikai aktivitás, „sedens” (ülő) életvitel, életminőség pedagógiai-pszichológiai szempontból	26	2	26
Physical activity, sedentary behaviour, quality of life from pedagogical-psychological perspective	26	2	26
Közgazdaságtan	15	1	15
Szervezetelmélet	15	1	15
Sportjog alkotmányos összefüggései és önszabályozása	15	1	15
Biometrics	30	2	30
Testnevelési tantervek elméleti és módszertani alapjai	30	2	30
Molecular Exercise Science	15	1	15
Molecular Methods	45	2	45
Endokrinológia és Testedzés	30	2	30
Endocrinology and Exercise	30	2	30
Humánbiológia	30	2	30



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Biometrics	<b>Code:</b>	DIBIOMETRICS
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Bence Kopper		
<b>Lecturer:</b>	Dr. Bence Kopper		
<b>Prerequisites:</b>	Research Methods		
<b>Type of subject:</b>	Theory	<b>HuQF/EFQ level:</b>	8
<b>Exam type (semester closing):</b>	Written and Oral		
<b>The aim of the course:</b>	To provide information to the PhD students about the statistical methods and softwares being used in sports science research.		

## COMPETENCIES TO BE DEVELOPED

	<b>HuQF</b>
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Has the necessary research methodology for the independent research of a given science / field.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy.

<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
<ol style="list-style-type: none"> <li>1. Different types of recorded data</li> <li>2. Parametric, non parametric data</li> <li>3. Basic statistical variables, graphs, tables</li> <li>4. Hypothesis testing, types of statistical hypotheses, normality, homogeneity</li> <li>5. Comparison of different samples:</li> </ol> Parametric tests: dependent, independent t-test ANOVA <ol style="list-style-type: none"> <li>6. Comparison of different samples:</li> </ol> Non parametric tests: Wilcoxon, Mann-Whitney U, Kolmogorov-Smirnov, Kruskal-Wallis Anova <ol style="list-style-type: none"> <li>7. Correlation analysis</li> </ol> Parametric: Pearson correlation Non parametric: Spearman correlation <ol style="list-style-type: none"> <li>8. Regression</li> <li>9. Chi-square test, contingency tables</li> <li>10. Different types of ANOVA</li> </ol> One Way Anova Repeated measures Anova Factorial Anova Mixed Model Anova. between-between, between-within <ol style="list-style-type: none"> <li>11. Multi variable correlation</li> <li>12. Factor analysis, cluster analysis</li> </ol>	
<b>INTERMEDIATE REQUIREMENTS</b>	
PPT presentation based on own research problem and data.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	PPT presentation based on own research problem and data performed until deadline.
<b>The main priori requirements completion of due to a lack</b>	In accordance with Doctorial School rules refusal of acceptance of course.
<b>MANDATORY LITERATURE</b>	
Vincent W. Weir J. (2012): Statistics in kinesiology. Humankinetics. Tenenbaum G. Driscoll M (2018): Methods of research in sports sciences. Meyer & Meyer T. Jerry, T Nelson: (2010): Research Methods in Physical Activity. Humankinetics. Statsoft Statistica software help: <a href="http://www.statisticsoftware.wordpress.com">www.statisticsoftware.wordpress.com</a> .	
<b>RECOMMENDED LITERATURE</b>	



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Endocrinology and exercise	<b>Code:</b>	DI5227_1M
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Csaba Nyakas		
<b>Lecturer:</b>	Dr. Klára Felszeghy		
<b>Prerequisites:</b>	Research Methods		
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Oral		

### The aim of the course:

- 1) The role of the endocrine, immune and other organs (with emphasis on the nervous system and muscles) as hormonal regulatory systems, in the regulation of sport- and other kinesiological movements and performance.
- 2) The goal of the course is to maintain and improve sports performance and health. Furthermore, understanding the regulation of metabolic processes necessary to achieve these goals, and explain the scientific basics.
- 3) Particular attention will be paid to hormonal regulation of the cellular and molecular levels of sports nutrition and sports kinesiology.
- 4) Age-related issues of endocrine status: endocrinology of aging, endocrinology of exercise and sport in elderlies
- 5) The role of gender and the characteristics of endocrinology corresponding to the exercise and sport.
- 6) Endocrinology of organ function, organ-specific hormones involved, and hormonal interactions between individual organs.

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Understands in a creative way the contexts and theories of the given field or field of study and the conceptual systems and terminology that make them up. Has the necessary research methodology for the independent research of a given science / field.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them. Able to creatively develop novel, hitherto unknown practical aspects of theoretical issues.

<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Able to have an equal role as a discussion partner with experts in the field.
<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
<p>1-2) Hormonal regulation of carbohydrate metabolism: role of insulin, leptin, growth and trophic hormones in the regulation of nutrition and movement, with particular reference to skeletal muscle system.</p> <p>3-4) Adipose tissue hormones, their role in the regulation of fat and carbohydrate metabolism.</p> <p>5-6) The effect and role of exercise and sports in the hormonal metabolism of carbohydrates and fats</p> <p>7-8) Hormonal regulation of protein metabolism in general and sport-type specific manner. Prevention of sport injuries and the principles of rehabilitation regarding hormonal effects.</p> <p>9) Sport-type specific approach in endocrinology.</p> <p>10) Thyroid Axis Prolactin and Exercise.</p> <p>11-12) Exercise, sport performance and the Hypothalamo-Pituitary-Adrenal Axis, hormonal aspects of stress hormones.</p> <p>13-14) Central nervous system involved in the regulation of metabolism: connection between the endocrine and nervous systems. Psychoneuroendocrinology of sport (stress and movement performance).</p> <p>15-16) Exercise Training and the Hypothalamic-Pituitary-Gonadal Axis in Men and Women</p> <p>17-18) Endocrine Responses to Exercise in the Developing Child and Adolescent</p> <p>19-20) Impact of Physical Exercise on Endocrine Aging. Effects of aging on the hormonal status.</p> <p>21-22) Hormonal relationship between movement and immune system. Role of acute infections in sports performance, possibilities of prevention. The relationship between stress and the immune system.</p> <p>23-24) Students in small groups work out selected topics, which will be presented at the end of the course (ppt presentations, based on the literature surveyed).</p> <p>25-26) Summary of main points of the lectures. Questions and answers. Questions of the students.</p>	
<b>INTERMEDIATE REQUIREMENTS</b>	
Presentation of a short report on one of the international publications (select one from the below literature-list, or select another one found in the literature freely). Extent of report is about 3-4 pages.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	<p>1) Rate of class attendance</p> <p>2) Result of oral/written exam</p> <p>3) Grade of a small group (1or 2 students) ppt lecture</p>
<b>The main priori requirements completion of due to a lack</b>	Additional exam if class attendance and the presentation of ppt lecture material is acceptable

<b>MANDATORY LITERATURE</b>
Lanfranco F, Strasburger CJ. (2016) Sports Endocrinology, Frontiers of Hormone Research Vol. 47, Karger
<b>RECOMMENDED LITERATURE</b>
1) Boden G, Chen X, Ruiz J, White JV, Rosetti L. 1994. Mechanisms of fatty acid-induced inhibition of glucose uptake. J. Clin. Invest. 93:2438–46. 2) Bussau VA, Ferreira LD, Jones TW, Fournier PA (2006) The 10-s maximal sprint: a novel approach to counter an exercise-mediated fall in glycemia in individuals with type 1 diabetes. Diabetes Care 29:601–606. 3) Coker RH, Kjaer M (2005) Glucoregulation during exercise: the role of the neuroendocrine system. Sports Med 35:575–583. 4) Duan C, Winder WW.(1992) Nerve stimulation decreases malonyl-CoA in skeletal muscle. J.Appl. Physiol. 72(3):901–4. 5) Froberg SO, Mossfeldt F. 1971. Effect of prolonged strenuous exercise on the concentration of triglycerides, phospholipids and glycogen in muscle of man. Acta Physiol. Scand. 82:167–71 6) Marliss EB, Vranic M (2002) Intense exercise has unique effects on both insulin release and its roles in glucoregulation: implications for diabetes. Diabetes 51:S271–S283.



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Free radicals, exercise physiology	<b>Code:</b>	DI5210_1M
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Zsolt Radák		
<b>Lecturer:</b>	Dr. Zsolt Radák		
<b>Prerequisites:</b>			
<b>Type of subject:</b>	Theory and Practice	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Written		
<b>The aim of the course:</b>	To provide information to the PhD students about the statistical methods and softwares being used in sports science research.		

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Has the necessary research methodology for the independent research of a given science / field. Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Can apply or further develop the specific methods of knowledge acquisition and problem solving in his / her field. Able to build and mediate new relationships relevant to his / her field of expertise, relevant to personal and community existence.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field. Its characteristic attitude is its solid professional commitment, the perpetuation of its commitment to finding new ways, and the acceptance of the need for persistent work.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy. Able to have an equal role as a discussion partner with experts in the field.



<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
This course is focusing on redox related adaptive process to exercise. The effects of single bout of exercise, regular exercise and epigenetical effects of long term exercise programs are explained. The mechanism of oxidative stress, oxidative damage, repair, antioxidant actions and redox regulations are explained during this course. Only theoretical lessons.	
<b>INTERMEDIATE REQUIREMENTS</b>	
Be present at the lessons and prepare presentations at the given subjects.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	Be present at the lessons and prepare presentations at the given subjects.
<b>The main priori requirements completion of due to a lack</b>	Refusal to sign.
<b>MANDATORY LITERATURE</b>	
Radak Z (eds) Free Radicals in Exercise and Aging. Human Kinetics, Champaign, USA. 2000.	
<b>RECOMMENDED LITERATURE</b>	
Radak Z. Physiology of Physical Training. Academic Press, New York, USA, 2018.	



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

Course title:	Molecular methods	Code:	DIMOLECMETH_1.
Credit value of the subject :	3 credits	Subject unit responsible for the subject :	School of Doctoral Studies
Course leader:	Dr. Zsolt Radák		
Lecturer:	Dr. Zsolt Radák		
Prerequisites:			
Type of subject:	Theory and Practice	HuQF/EQF level:	8
Exam type (semester closing):	Written		
The aim of the course:	To provide information to the PhD students about the statistical methods and softwares being used in sports science research.		

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Has the necessary research methodology for the independent research of a given science / field. Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Can apply or further develop the specific methods of knowledge acquisition and problem solving in his / her field. Able to build and mediate new relationships relevant to his / her field of expertise, relevant to personal and community existence.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field. Its characteristic attitude is its solid professional commitment, the perpetuation of its commitment to finding new ways, and the acceptance of the need for persistent work.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy. Able to have an equal role as a discussion partner with experts in the field.

<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
This is almost fully practical course (10% theory and 90% practice) which aims to teach basic molecular biology methods, including how to prepare buffers, how to homogenate tissues, etc. We are going to study measurements of protein contents, do activity measurements and perform Western blot analysis.	
<b>INTERMEDIATE REQUIREMENTS</b>	
Visiting classes,	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	Achieve a level of proficiency
<b>The main priori requirements completion of due to a lack</b>	Refuce to sign
<b>MANDATORY LITERATURE</b>	
Walker J. (eds) Methods in Molecular Biology, Humana Press, New York, 2018.	
<b>RECOMMENDED LITERATURE</b>	



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Physical activity, sedentary behaviour, quality of life from pedagogical-psychological perspective	<b>Code:</b>	DIPHYSICALACT
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. István Soós		
<b>Lecturer:</b>	Dr. István Soós		
<b>Prerequisites:</b>	Research Methods		
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Written and Oral		

### The aim of the course:

This course implements a scientific training programme based on studies in sports pedagogy, sports psychology and research methodology, including:

- Extensive, primarily pedagogical-psychological analysis of the relationship between physical activity and healthy lifestyle as interdisciplinary sciences.
- An overview of physical activity and inactivity, broad spectrum, interrelationship, and discussion of methodological approaches based on "objective" and self-reported pedagogical-psychological aspects.
- The pedagogical and psychological aspects of physical activity development, especially among young people, the theoretical and practical issues of further groups requiring special approach.

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science. Has the necessary research methodology for the independent research of a given science / field. Understands in a creative way the contexts and theories of the given field or field of study and the conceptual systems and terminology that make them up.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Can apply or further develop the specific methods of knowledge acquisition and problem solving in his / her field.

	Able to build and mediate new relationships relevant to his / her field of expertise, relevant to personal and community existence.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field. Its characteristic attitude is its solid professional commitment, the perpetuation of its commitment to finding new ways, and the acceptance of the need for persistent work.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy. Responsibly raises and answers new ethical questions related to the theoretical and practical issues of his / her profession. Able to have an equal role as a discussion partner with experts in the field.

#### **CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)**

The optional subject contains a semester course (26 lessons). An interactive course, as well as problem-based learning (PBL), is also developed with the active participation of students. These topics include scientific, educational, and practical approaches to develop students' broad and good learning and teaching experiences. The course deals with the processing of issues of physical activity and related interdisciplinary disciplines in 26 hours. Assessment is taken place in 25-26. lessons (about 15 minutes per student). In addition, students will submit a 1,500-word ( $\pm 10\%$ ) literature analysis related to the research topics in the form of an essay. Weighting of the oral presentation and the written paper are 50-50% for the practical mark. The format of the written paper should be submitted in Times New Roman, font size 12, printed with double spacing, word processed on a computer. Good command of English proficiency is required when enrolling in the course, as students will also receive journal articles in English for processing in the lecture and the written paper.

Titles of physical activity sedentary lifestyle, quality of life course pedagogical-psychological topics:  
1. Introduction and definitions I. Introduction to Physical Activity Research (Role, Significance, Historical Overview) in Pedagogical-Psychological Approach.

2. Introduction and definitions II. Definition of physical activity and overview from a pedagogical-psychological point of view. Motivating factors of sport participation.

3. Health related physical activity and sedentary behaviours research I. Pedagogical-psychological approach to health, physical activity and quality of life. Students presentation on „Why some people are active and others not?“

4. Health related physical activity and sedentary behaviours research II. Research on physical activity and inactivity ("sedentary lifestyle"), international trends. Motivational aspects of physical activity and sedentary behaviours: An overview from a pedagogical-psychological perspective.

5. Pedagogical-psychological research of physical activity and inactivity in Hungary and Central-Eastern Europe. Creating positive motivational climate in sport and exercise.

6. Research methodological approaches I. Objective Measurement Methods and Review of Related Research Literature. Correlations and determinants of physical activity and sedentary behaviours

7. Research methodological approaches II. Pedagogical-psychological measurement methods for studying physical activity and sedentary lifestyle. Ecological Momentary Assessments, diary and questionnaire methods. Students presentation on physical activity and sedentary behaviours in relationships with their own PhD research topic.

8. Pedagogical-motivational intervention possibilities for physical activity development and sedentary behaviours

prevention. Lifestyle and motivation of young athletes in special situations: Black pedagogical situations.

9. Pedagogical-motivational approaches I. Self-Determination Theory, The Stages of Change Theory and Analysis of Related Research and Literature. Roma physical activity and lifestyle research.

10. Pedagogical-motivational approaches II. Theory of Planned Behavior Theory and Trans-Contextual Model of Motivation, and analysis of related research and literature. Ongoing research at TF (ELTE-OSEI-TF Research Project, AHKGA International Research Project, OTKA Research)

11. Pedagogical-psychological research of physical activity and sedentary lifestyles of different age groups and genders, and analysis of related literature. Revision of topics.

12. Different pedagogical personalities, lifestyle and physical activity and sedentary behaviours of groups requiring special treatment. Students exam: Presentations in pairs,

13. Presentation of the students' pedagogical-psychological themes on physical activity, sedentary lifestyle as part of the final assessment. Students refer-defer exam: Presentations in pairs.

## THEMATICS

1-2. hour

- Introduction to the pedagogical-psychological research of physical activity and sedentary lifestyle I
- Why is physical activity research important?
- A brief historical overview of research on physical activity and healthy living

3-4. hour

- Introduction to the pedagogical-psychological research of physical activity and sedentary lifestyle II
- Defining physical activity
- Linking physical activity and sedentary (sitting) lifestyle research in social and natural sciences
- Motivating factors of Sport participation

5-6. hour

- Health and physical activity (pedagogical and psychological approach)
- How does physical activity affect health?
- The relationship between physical activity and a healthy lifestyle
- The role of physical activity in quality of life
- Students presentation on „Why some people are active and others not?“

7-8. hour

- Pedagogical-psychological research on physical activity and inactivity I
- International trends in physical activity and sedentary (sitting) lifestyle research
- International Recommendations for Increasing Physical Activity and Reducing Sitting time
- Motivational aspects of physical activity and sedentary behaviours: An overview from a pedagogical-psychological perspective

9-10. hour

- Pedagogical-psychological research on physical activity and inactivity II
- Researching physical activity and sedentary (sitting) life in Central and Eastern Europe
- Research on physical activity and sedentary (sitting) lifestyle in Hungary
- Creating positive motivational climate in sport and exercise

11-12. hour

- Measurement methods for research on physical activity and sedentary lifestyle I
- "Objective" measurement methods and literature on physical activity research
- Correlations and determinants of physical activity and sedentary behaviours

13-14. hour

- Measurement methods for physical activity and sedentary lifestyle research II
- Self-report measures in physical activity
- Ecological Momentary Assessment (EMA)
- Students presentation on physical activity and sedentary behaviours in relationships with their own PhD research topic

15-16. hour

- Motivational-intervention opportunities for physical activity development
- The pedagogical and psychological aspects of developing and increasing physical activity
- Theories and development strategies for "integrating" physical activity into the individual's way of life
- Lifestyle and motivation of young athletes in special situations: Black pedagogical situations.

17-18. hour

- Motivational theories, models, approaches I
- The role of internal motivation in increasing the physical activity of the population.
- The Self-Determination Theory, The Stages of Changes Theory and Related Research, Literature Review and Analysis
- Roma physical activity and lifestyle research

19-20. hour

- Motivational theories, models, approaches II
- The Theory of Planned Behavior
- The Trans-Contextual Model of Motivation
- Barriers to physical activity, behaviour change
- Ongoing research at TF (ELTE-OSEI-TF Research Project, AHKGA International Research Project, OTKA Research)

21-22. hour

- Pedagogical-psychological research of physical activity and sedentary lifestyle of different age groups and review and analysis of related literature
- Research on the physical activity and sedentary lifestyle of childhood groups, young people
- Researching modern technical devices, time spent in front of the screen and the effect of multitasking
- Researching the physical activity and sedentary lifestyle of middle-age people
- Researching the physical activity and sedentary lifestyle of the elderly
- Revision of topics.

23-24. hour

- Lifestyle and physical activity of groups requiring special treatment
- Physical activity of different ethnicities in international literature
- Research on the lifestyle and physical activity of young Roma in Hungary
- The role of socio-economic status in the physical activity of different social groups
- Students exam: Presentations in pairs

25-26. hour <ul style="list-style-type: none"> <li>• Presentation of students' papers on the subject of pedagogical-psychological research on physical activity and sedentary lifestyle</li> <li>- Examination, evaluation</li> <li>- Summary and feedback of the practical exam</li> <li>- Students refer-defer exam: Presentations in pairs</li> </ul>	
<b>INTERMEDIATE REQUIREMENTS</b>	
Critique analysis, evaluation, class discussion of the given literature .	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	The exam form is a practical mark that students receive after their oral presentation and assessment of their written work. You can earn 2 credit points by a successfully passing the assessments of this course.
<b>The main priori requirements completion of due to a lack</b>	Refusal to accept the semester.
<b>MANDATORY LITERATURE</b>	
Blair, Steven N (2009). Physical inactivity: the biggest public health problem of the 21st century. British. Journal of Sports Medicine. 43, 1-2. <a href="http://bjsm.bmj.com/cgi/content/full/43/1/1#otherarticles">http://bjsm.bmj.com/cgi/content/full/43/1/1#otherarticles</a>	
Pate, R.R., O'Neill, J.R. and Lobelo, F. (2009). The evolving definition of "sedentary." Exerc. Sport Sci. Rev., (4), 173-178.	
<b>RECOMMENDED LITERATURE</b>	
Baumann, A.E. Seis, R.S., Sallis, J.F., Wells, J.C., Loos, R.J.F., Martin, B.W. (2012). Correlates of physical activity: Why are some people physically active and others not? <i>Lancet</i> , 380, 258-271.	
Keren Best, Kylie Ball, Dorota Zarnowiecki , Rebecca Stanley and James Dollman (2017). In Search of Consistent Predictors of Children's Physical Activity. International Journal of Environmental Research and Public Health, 14, 1-14.	





# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Research Methods	<b>Code:</b>	DI5220K_M
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Bence Kopper		
<b>Lecturer:</b>	Dr. Bence Kopper		
<b>Prerequisites:</b>			
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Written and Oral		
<b>The aim of the course:</b>	To provide information to the PhD students about the research methods and data gathering techniques being used in sports science research.		

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Has the necessary research methodology for the independent research of a given science / field.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents and, in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy. Responsibly raises and answers new ethical questions related to the theoretical and practical issues of his / her profession.

<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
<p>Typical features of scientific research</p> <ol style="list-style-type: none"> <li>2. Guidelines, milestones in PhD process</li> <li>3. Steps of scientific research (1) <ul style="list-style-type: none"> <li>Identification of research problem</li> <li>Systematic study of research literature</li> <li>Types of hypothesis</li> </ul> </li> <li>4. Steps of scientific research (2) <ul style="list-style-type: none"> <li>Quantitative and qualitative methods</li> <li>Process of data recording</li> </ul> </li> <li>5. Ethical guidelines</li> <li>6. Steps of scientific research (3) <ul style="list-style-type: none"> <li>Methods for processing data</li> <li>Conclusions, limitations, comparisons</li> </ul> </li> <li>7. Publication of research results, manuscript, editorial softwares, guidelines, statements</li> <li>8. PhD dissertation steps, requirements</li> </ol>	
<b>INTERMEDIATE REQUIREMENTS</b>	
PPT presentation based on own research problem and planned data measurement technique, hypotheses, ethical issues, limitations.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	PPT presentation based on own research problem and data performed until deadline.
<b>The main priori requirements completion of due to a lack</b>	In accordance with Doctorial School rules refusal of acceptance of course.
<b>MANDATORY LITERATURE</b>	
<p>Vincent W. Weir J. (2012): Statistics in kinesiology. Humankinetics.</p> <p>American Phychological Association: (2005): Publication Manual. American Phychological Association.</p> <p>T. Jerry, T Nelson: (2010) Research Methods in Physical Activity. Humankinetics.</p>	
<b>RECOMMENDED LITERATURE</b>	



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Sport in Contemporary Society I.	<b>Code:</b>	DI5345KVA_1A
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Gyöngyi Szabó Földesiné and Dr. Tamás Dóczi		
<b>Lecturer:</b>	Dr. Gyöngyi Szabó Földesiné and Dr. Tamás Dóczi		
<b>Prerequisites:</b>	Research Methods		
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Oral		
<b>The aim of the course:</b>	<ul style="list-style-type: none"> <li>• To expand students' knowledge about contemporary social phenomena, social processes and social behavior in the field of sport and beyond.</li> <li>• To enhance students' capability of understanding and critically analysing the tendencies that define contemporary global sport.</li> <li>• To develop students' skills to creatively apply their newfound knowledge in their research work.</li> </ul>		

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Understands in a creative way the contexts and theories of the given field or field of study and the conceptual systems and terminology that make them up. Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science.
<b>Skills (area-general and area-specific skills, motor skills)</b>	<p>Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them.</p> <p>Able to creatively develop novel, hitherto unknown practical aspects of theoretical issues.</p> <p>Able to build and mediate new relationships relevant to his / her field of expertise, relevant to personal and community existence.</p> <p>Can apply or further develop the specific methods of knowledge acquisition and problem solving in his / her field.</p>

<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents and, in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field. Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy. Responsibly raises and answers new ethical questions related to the theoretical and practical issues of his / her profession.
<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
13. Sport as a social phenomenon – sociological approaches to sport. Sport as a social subsystem. 14. Sport and social change – the evolution of modern sport. 15. Sport and globalization 16. The role of the state, the civil sector and the business sector to the functioning of sport as a social subsystem 17. Sport models on the five continents 18. Sport, politics and policy 19. Sport in the European Union 20. The impact of Eastern European political and economic transitions on sport 21. Sport and the economy. The impact of the global economic crisis on sport 22. Sport and the media 23. Values of sport in principle and in practice. Sport socialization; sport as a setting of socialization. 24. Sport as a way of life, lifestyle, quality of life 25. Sport and law, sport and human rights, sports law. Sport, sustainable development, environmental protection. 26. Sport in education, education in sport	
<b>INTERMEDIATE REQUIREMENTS</b>	
Written test on the key terms used related to the new topics of the semester. Oral presentation on one of the topics.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	Visiting the majority of the classes. Active participation in the classes. Oral presentation. Test writing with at least 80 % out of 100%. Oral exam on the three selected papers and the topics covered during the course.
<b>The main priori requirements completion of due to a lack</b>	
<b>MANDATORY LITERATURE</b>	
<ul style="list-style-type: none"> <li>Coakley, J. (2015) <i>Sport in Society: Issues and Controversies</i>. McGraw-Hill, New York.</li> </ul> Relevant articles from the following international journals from the past 10 years: <ul style="list-style-type: none"> <li>International Review for the Sociology of Sport</li> <li>Sociology of Sport Journal</li> </ul>	

- European Journal for Sport and Society
- Physical Culture and Sport. Studies and Research

+ Three papers related to the topic of the PhD student's thesis (can be from the list of recommended readings)

### RECOMMENDED LITERATURE

- Coakley, J. (2011) Youth Sports: "What Counts as Positive Development"? *Journal of Sport and Social Issues* 35(3), 306-324.
- Dóczi, T. & Gál, A. (2016): Sociology of Sport: Hungary. In Young, K. (ed.) *Sociology of Sport: A Global Subdiscipline in Review*. Bingley, Emerald, 207-225.
- Dunning, E. (1994) Sport in Space and Time: "Civilizing Processes", Trajectories of State-Formation and the Development of Modern Sport. *International Review for the Sociology of Sport*, 4, 331-347.
- Eichberg, H. (1984) Olympic Sport: Neo-colonialism and Alternatives. *International Review for the Sociology of Sport*, 1. 98-108.
- Földesiné Sz. Gy. (2009) Class or Mass: (Sport for All) Policy at a Crossroads. *Physical Culture and Sport. Studies and Research*, Vol. 46, 147-156.
- Földesiné Szabó Gy. (2010) Social Exclusion/Inclusion in the Context of Hungarian Sport. *Physical Culture and Sport. Studies and Research*, Vol. 50, 44-59.
- Földesiné Sz. Gy., Dóczi, T. (2011) (eds): *The Interaction of Sport and Society in the V4 Countries*. Hungarian Society for Sport Sciences, Budapest
- Gál A., Kosiewicz J., Sterbenz T. (szerk.) 2017: Sport and Social Sciences with Reflection on Practice. AWF-ISSSS, Warsaw
- Giulianotti, R. (1999) *Football: a sociology of the global game*. Cambridge, Polity Press.
- Giulianotti, R. (2004) Human rights, globalization and sentimental education: The case of sport. *Sport in Society*, 7, 355-369.
- Henry, I. (2009) European models of Sport: Governance, Organisational Change and Sports Policy in the EU, *Journal of Policy for Physical Education and Sport* 18, 1-22.
- Kelly, L. (2011) 'Social inclusion' through sports-based interventions? *Critical Social Policy* 31(1), 126-150.
- Kovács, Á. & Dóczi, T. (2019): Elite athletes and media appearances: opportunity or obligation? *Sport in Society*, in press, DOI: 10.1080/17430437.2019.1599861
- Kovács, Á. & Dóczi, T. (2018): The relation between Olympians and Employees of the Media in Hungary: Motivations, Attitudes, Rejection. *Physical Culture and Sport. Studies and Research*, 78(1), 5-12.
- Maguire, J. (1999) *Global Sport: Identities, Societies, Civilisations*. Cambridge, Polity Press.
- Nicholson, M., Hoye, R., Houlihan, B. (eds) (2011): *Participation in Sport. International Policy Perspectives*. Routledge, London and New York..
- Sam, M. P. (2009) The public management of sport: Wicked problems, challenges and dilemmas. *Public Management Review* 11, 499-513.



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Sport in Contemporary Society II.	<b>Code:</b>	DI5346KVA_2A
<b>Credit value of the subject :</b>	1 credit	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Gyöngyi Szabó Földesiné and Dr. Tamás Dóczi		
<b>Lecturer:</b>	Dr. Gyöngyi Szabó Földesiné and Dr. Tamás Dóczi		
<b>Prerequisites:</b>	Sport in Contemporary Society I.		
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Oral		
<b>The aim of the course:</b>	<ul style="list-style-type: none"> <li>• To expand students' knowledge about contemporary social phenomena, social processes and social behavior in the field of sport and beyond.</li> <li>• To enhance students' capability of understanding and critically analysing the tendencies that define contemporary global sport.</li> <li>• To develop students' skills to creatively apply their newfound knowledge in their research work.</li> </ul>		

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Understands in a creative way the contexts and theories of the given field or field of study and the conceptual systems and terminology that make them up. Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science.
<b>Skills (area-general and area-specific skills, motor skills)</b>	<p>Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them.</p> <p>Able to creatively develop novel, hitherto unknown practical aspects of theoretical issues.</p> <p>Able to build and mediate new relationships relevant to his / her field of expertise, relevant to personal and community existence.</p> <p>Can apply or further develop the specific methods of knowledge acquisition and problem solving in his / her field.</p>

<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents and, in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field. Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Builds and initiates new areas of knowledge and initiates new practical solutions with creative, creative autonomy. Responsibly raises and answers new ethical questions related to the theoretical and practical issues of his / her profession.
<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
27. Sport and social stratification. Sport and equal opportunities: active participation in sport. 28. Passive involvement in sport: fandom, fan behaviour, supporter identities. Sport and national identity. 29. Sport and social mobility. Sport and migration. 30. Sport and social inclusion: social disadvantage, minorities, disability. 31. Sport and gender. Homosexuality in sport. HIV and AIDS in sport. 32. Sport and deviant behaviour (matchfixing, cheating). Sport and doping. 33. Aggression, violence and sport. Sport, prejudice and discrimination. Racism, xenophobia and sport.	
<b>INTERMEDIATE REQUIREMENTS</b>	
Written test on the key terms used related to the new topics of the semester.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	Visiting the majority of the classes. Active participation in the classes. Test writing with at least 80 % out of 100%. Oral exam on the three selected papers and the topics covered during the course
<b>The main priori requirements completion of due to a lack</b>	
<b>MANDATORY LITERATURE</b>	
<ul style="list-style-type: none"> <li>Coakley, J. (2015) <i>Sport in Society: Issues and Controversies</i>. McGraw-Hill, New York.</li> </ul> Relevant articles from the following international journals from the past 10 years: <ul style="list-style-type: none"> <li>International Review for the Sociology of Sport</li> <li>Sociology of Sport Journal</li> <li>European Journal for Sport and Society</li> <li>Physical Culture and Sport. Studies and Research</li> </ul>	

+ Three papers related to the topic of the PhD student's thesis.

#### RECOMMENDED LITERATURE

- **Dóczi T.** (2012): Gold Fever(?) Sport and national identity – the Hungarian case. *International Review for the Sociology of Sport*. 47(2), 163-180.
- **Dóczi, T., Kammerer, S., Maijala, H-M., Nols, Z., Pekkola, H., Strauch, M., Theeboom, M. (2012):** **“Creating a Level Playing Field” – Social inclusion of migrants and ethnic minorities in sport.** Brussels: ENGSO.
- Földesiné Sz. Gy. (2009) Class or Mass: (Sport for All) Policy at a Crossroads. *Physical Culture and Sport. Studies and Research*, Vol. 46, 147-156.
- Földesiné Szabó Gy. (2010) Social Exclusion/Inclusion in the Context of Hungarian Sport. *Physical Culture and Sport. Studies and Research*, Vol. 50, 44-59.
- Földesiné Sz. Gy., Dóczi. T. (2011) (szerk.): *The Interaction of Sport and Society in the V4 Countries*. Hungarian Society for Sport Sciences, Budapest
- Gál A., Kosiewicz J., Sterbenz T. (szerk.) 2017: Sport and Social Sciences with Reflection on Practice. AWF-ISSSS, Warsaw
- Giulianotti, R. (1999) *Football: a sociology of the global game*. Cambridge, Polity Press.
- Kelly, L. (2011) 'Social inclusion' through sports-based interventions? *Critical Social Policy* 31(1), 126-150.
- Nicholson, M., Hoyer, R., Houlihan, B. (eds) (2011): *Participation in Sport. International Policy Perspectives*. Routledge, London and New York.





# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Sport Nutrition	<b>Code:</b>	SPORTTÁPLKV
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr .Csaba Nyakas		
<b>Lecturer:</b>			
<b>Prerequisites:</b>			
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Oral		
<b>The aim of the course:</b>	<p>1) The task of the course is to transfer knowledge of sports and nutrition physiology that help to combine theoretical and practical knowledge of physical activity-sports and nutrition in the practice. It is essential for sports nutrition to find a harmony between sports performance and an appropriate nutritional background conditions.</p> <p>2) The aim of the course is to promote the training of professionals who play an important role in enhancing the performance of athletes and in educational work promoting a healthy lifestyle (physical education teachers, recreation professionals, etc.).</p> <p>3) Since knowledge of the body's metabolism is essential for the development of a healthy lifestyle and sports performance, we need to understand and study the effects of sports nutrition through the functioning of the body's metabolism and regulatory organ systems. Ingested foods do not act directly, but through the inert metabolism.</p> <p>4) Sport nutrition is directly related to the performance-oriented functioning of sports physiology, endocrinology, immune regulation, and neural functions. The curriculum of sports nutrition is related to the knowledge of nutrition science, both at the MSc and PhD level.</p> <p>5) A bridge should also be built towards the impact of sports diets, nutritional</p>		

	supplements and doping agents on the regulation of sports performance, as well as on the sports nutrition tasks of the coach and trainer.
<b>COMPETENCIES TO BE DEVELOPED</b>	
	<b>HuQF</b>
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Understands in a creative way the contexts and theories of the given field or field of study and the conceptual systems and terminology that make them up. Has the necessary research methodology for the independent research of a given science / field.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them. Able to creatively develop novel, hitherto unknown practical aspects of theoretical issues.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Able to have an equal role as a discussion partner with experts in the field.
<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
1-2) Food nutrients: structure, function, and digestion, absorption and assimilation (general view, the principles of basic nutritional physiology) 3-4) The macronutrients (carbohydrates, fats) 5-6) Protein, micronutrients and water 7) Nutrient role in bioenergetics 8-9) Macronutrient metabolism in exercise and training 10) Measurement of energy in food and during physical activity 11) Nutritional recommendations for the physically active person 12) Nutritional considerations for intense training and sport competition 13) Thermoregulation and fluid balance during heat stress 14) Pharmacological, chemical and nutritional ergogenic aids 15) Disordered eating (practice) 16) Body composition assessment and sport-specific observations 17) Energy balance, exercise and weight control 18) 3-day dietary survey 19-20) Nutritional supplements, doping (avoidance) 23-24) Students in small groups work out selected topics, which will be presented at the end of the course (ppt presentations, based on the literature surveyed). 25-26) Summary of main points of the lectures. Questions and answers. Questions of the students.	
<b>INTERMEDIATE REQUIREMENTS</b>	

Presentation of a short report on one of the international publications (select one from the below literature-list, or select another one found in the literature freely). Extent of report is about 3-4 pages.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	1) Rate of class attendance 2) Result of oral/written exam 3) Grade of a small group (1or 2 students) ppt lecture
<b>The main priori requirements completion of due to a lack</b>	Additional exam if class attendance and the presentation of ppt lecture material is acceptable
<b>MANDATORY LITERATURE</b>	
McArdle WD, Katch FI, Katch VL. (2005) Sports & Exercise Nutrition. Lippincott Williams & Wilkins, Philadelphia.  Tihanyi András (2015) Sportspecifikus sporttáplálkozás. Krea-Fitt Kft	
1) Kerkick CM, Wilborn CD, Roberts MD, et al. (2018) ISSN exercise & sports nutrition review update: research & recommendations. J Int Soc Sports Nutr. 2018 Aug 1;15(1):38. doi: 10.1186/s12970-018-0242-y. 2) Erdman KA. (2015) A Lifetime Pursuit of a Sports Nutrition Practice. Can J Diet Pract Res. 2015 Sep;76(3):150-4. doi: 10.3148/cjdpr-2015-021.	



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

## BASIC DATA OF THE SUBJECT

<b>Course title:</b>	Sport Physiology I-II.	<b>Code:</b>	DI5133K_1M és DISPORTÉLET TANII
<b>Credit value of the subject :</b>	3+2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Gábor Pavlik		
<b>Lecturer:</b>	Dr. Gábor Pavlik		
<b>Prerequisites:</b>	Research Methods		
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Oral		
<b>The aim of the course:</b>	To know the basic physiologic functions of the human body at rest and during exercise in physically trained and in non-trained subjects		

## COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science.
<b>Skills (area-general and area-specific skills, motor skills)</b>	Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them. Can apply or further develop the specific methods of knowledge acquisition and problem solving in his / her field.
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions, views; intentions, aspirations)</b>	Represents in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field. Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field. Its characteristic attitude is its solid professional commitment, the perpetuation of its commitment to finding new ways, and the acceptance of the need for persistent work.
<b>Autonomy and responsibility (extent, areas along the</b>	Able to participate in the formulation of theoretical and practical issues with a leading role and a high level of cooperation.

<b>dimensions of action in the social environment)</b>	Able to have an equal role as a discussion partner with experts in the field. Responsibly raises and answers new ethical questions related to the theoretical and practical issues of his / her profession.
<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
<b>Sports physiology I.</b> 1. lecture: The functional structure of the human body. Movement system 2. lecture: Structure and function of the muscles 2. lecture: Fatigue, crisis and second wind, muscular soreness, warming up 3. lecture: Strength, speed, endurance 4. lecture: Aerobic system, respiration 5. lecture: Constituents and functions of the blood, its role in the sports 6. lecture: Physiology of the heart 7. lecture: The athlete's heart <b>Sports physiology II.</b> 1. lecture: The vascular system, physiology of the circulation 2. lecture: Physiology of the metabolism: digestion, absorption 3. lecture: Intermediary metabolism, basal metabolic rate 4. lecture: Daily energy balance, nutrition 5. lecture: Fluid balance, functions of the kidneys 6. lecture: Nervous system 7. lecture: Endocrine glands 8. lecture: Special sports physiologic questions: division of the sports movements, control of the physical condition, doping question	
<b>INTERMEDIATE REQUIREMENTS</b>	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	Requirement: participation in the lessons, satisfactory performance in the examinations  Examination: oral
<b>The main priori requirements completion of due to a lack</b>	Reuptake of the subject
<b>MANDATORY LITERATURE</b>	

## RECOMMENDED LITERATURE



# COURSE DESCRIPTION

UNIVERSITY OF PHYSICAL EDUCATION

### BASIC DATA OF THE SUBJECT

<b>Course title:</b>	The Scientific Approach of the Sport Management	<b>Code:</b>	DISCISPORTMANAG
<b>Credit value of the subject :</b>	2 credits	<b>Subject unit responsible for the subject :</b>	School of Doctoral Studies
<b>Course leader:</b>	Dr. Gábor Gécsi		
<b>Lecturer:</b>	Dr. Gábor Gécsi		
<b>Prerequisites:</b>			
<b>Type of subject:</b>	Theory	<b>HuQF/EQF level:</b>	8
<b>Exam type (semester closing):</b>	Written and Oral		
<b>The aim of the course:</b>	Students will learn about the current issues of sport management and the methods of scientific research in sport management.		

### COMPETENCIES TO BE DEVELOPED

	HuQF
<b>Knowledge (depth, organization, extent, flexibility, formability of knowledge)</b>	<p>Has the necessary research methodology for the independent research of a given science / field.</p> <p>Has a knowledge at the research level of the subject, general and specific characteristics, main directions and precisely defined boundaries, agreed and disputed contexts of the given field of science.</p> <p>Understands in a creative way the contexts and theories of the given field or field of study and the conceptual systems and terminology that make them up.</p>
<b>Skills (area-general and area-specific skills, motor skills)</b>	<p>Able to creatively analyze the given field, to formulate comprehensive and special contexts in a synthetic, new way and to have adequate evaluative and critical activity with them.</p> <p>Ability to plan and implement new projects, conduct research in a given field of science, develop new techniques and approaches.</p> <p>Ability to identify unforeseen professional problems and to explore the detailed theoretical and practical background at the research level required to solve them.</p>
<b>Attitudes (emotional and evaluative attitudes, judgment; opinions,</b>	Represents and, in connection with one's own topic, further develops the relations that contribute to the process of human self-creation due to the specifics of the field.

<b>views; intentions, aspirations)</b>	Has an interest and the ability to learn, which makes it possible to identify and solve the currently opaque, unpredictable research problems of the field. Its characteristic attitude is its solid professional commitment, the perpetuation of its commitment to finding new ways, and the acceptance of the need for persistent work.
<b>Autonomy and responsibility (extent, areas along the dimensions of action in the social environment)</b>	Able to participate in the formulation of theoretical and practical issues with a leading role and a high level of cooperation. Able to have an equal role as a discussion partner with experts in the field. Responsibly raises and answers new ethical questions related to the theoretical and practical issues of his / her profession. .
<b>CONTENT ELEMENTS OF THE CURRICULUM: theory + practice (if any)</b>	
<ol style="list-style-type: none"> <li>1. The most important stakeholders in sport: athletes and sports professionals</li> <li>2. Governance of sport on the civil and governmental side, implementation of the principles of good governance in sport</li> <li>3. Theoretical and practical issues of sport financing in the current regulatory environment</li> <li>4. Features of state-of-the-art sports facilities and major sporting events</li> <li>5. Scientific research methods and opportunities in national and international sports life</li> <li>6. Features of major scientific journals in the field of sports management</li> </ol>	
<b>INTERMEDIATE REQUIREMENTS</b>	
A 10-page scientific article on sports management analysis of the student's own topic.	
<b>METHOD OF SEMI-CLOSURE, ASPECTS OF FORMING A SUBJECT GRADE</b>	
<b>Semester requirements</b> ( rate of class attendance, fulfillment of examination papers and other requirements)	According to Study and examination rules
<b>The main priori requirements completion of due to a lack</b>	According to Study and examination rules
<b>MANDATORY LITERATURE</b>	
Sterbenz T., Géczi G. (2016): <i>Sportmenedzsment</i> . Testnevelési Egyetem	
<b>RECOMMENDED LITERATURE</b>	
Pedersen, P. M., Thibault, L. (2019): <i>Contemporary Sport Management</i> . 6th Edition. Human Kinetics	

## **Formal requirements of the doctoral dissertation**

The dissertation is a summarizing work demonstrating the candidate's knowledge of literature, objectives, methods and new scientific results. The academic publications related to the dissertation are part of the dissertation.

The dissertation shall be disputed in the research centre. The research centre disputation shall be organized by the Head of the DI and chaired by the appointed president. At least five scientifically qualified lecturers and researchers shall take part in the research centre disputation.

Two pre-opponents appointed by the DIT shall review the dissertation. The reviewers shall prepare a written critique of the dissertation within one month upon request and declare whether the dissertation can be submitted for research centre disputation. The dissertation and copies of the doctoral student's own scientific publications used in it shall be first sent in 1-1 copies respectively to the VMB for preliminary critique.

The official reviewers of the dissertation shall be invited by the President of the EDT, and the dissertation shall also be sent by the President of the EDT for review in electronic form to the opponents, by indicating the evaluation deadline.

The dissertation shall be submitted for public defence within two months from receiving the supporting reviews, but within one year from the submission of the dissertation for preliminary critique. The Assessment Committee shall consist of at least five members, a chairman, two members and two official reviewers.

## **Doctoral public disputation**

The date and place of the public disputation shall be announced by the Doctoral Secretariat after consultation with the members of the Assessment Committee and the candidate.

The condition for a public disputation is that the chairman, two members of the committee and, in the event of a unanimous assessment, at least one reviewer is present. The opinion of the reviewer who is not present at the defence shall be presented at the defence. The presence and participation of the reviewer who has not accepted the dissertation is also a condition for holding the public disputation. Exceptions to this rule may be made in exceptional cases with the agreement of the President of the EDT.

The doctoral candidate shall present the main results of their dissertation in a free lecture in the framework of the public disputation, and then respond to the written questions of the opponents and other questions that arise during the disputation.

After concluding the disputation, the committee decides on the approval of the dissertation in a closed session, by secret ballot with a score of 1 to 5, which requires at least two-thirds (67%) of the points that can be obtained.

Based on the minutes of the doctoral degree procedure, the qualification of the degree shall be determined and approved by the President of the EDT.



## Doctoral Certificate

The Doctoral Certificate is issued by the University in Hungarian and English.

(4) The Doctoral Certificate is a public document with the coat of arms of Hungary, which contains the name of the University of Physical Education, institutional identification number, the serial number of the diploma, the name of the degree holder, their birth name, place and time of birth, the name of the degree acquired, classification of the academic field or academic discipline, place, year, month and date of issue, classification of the degree certified by the doctoral certificate according to the Hungarian Qualifications Framework and the European Qualifications Framework. It also includes the signature of the Rector of the University of Physical Education and the President of the EDT, and the imprint of the stamp of the University.

Persons who have obtained a doctoral degree shall be entitled to add the abbreviation "doctor" or "Dr." or the designation "PhD" to their name.

## IV. METHODS OF ACQUIRING PROFESSIONAL COMPETENCIES

### **Theoretical lectures, practices and internships Study**

credits:

The measuring unit for assessing studies is the unit of study (study credit point). A unit of study - in the case of courses - is equivalent to the lecture and / or practice of 15 lessons. Courses can be organized in blocks, within a semester, or across semesters. A credit can also be earned by completing two 8-hour courses. Credit must be recognized in the semester in which the exam was completed.

In a doctoral training programme *study* credit points can be earned upon successful completion of subjects taken as a course. The rating is based on a three-point or five-point scale. The condition for approving credit points is a sufficient (pass) or better exam grade. The number of available credit points must be announced when announcing the course or before enrolling in the course. The grade obtained in the final examination of the course may not affect the number of credit points that can be obtained.

During the training, the student must earn at least 16 study credits (units). Of these, at least 5 credits must be obtained with compulsory elective subjects. The thesis supervisor may require up to 8 additional study units, preferably before the start of the training, which courses the doctoral student should complete. The other units can also be earned by completing any courses, lecture series approved by the EDT. At least half of the study credit points must be obtained in courses advertised by the University. The doctoral student's performance in each course / session must be assessed in the form previously advertised - written, oral or practical exam.

Up to 100% of the study credits can be taken by the student at a doctoral school of another university (credit transfer).

#### Research credits:

The *research* credits can be earned by the doctoral student as a researcher in supervised research work. The performance of the credits is evaluated and confirmed by the thesis supervisor according to the research plan in the index (semi-annual report) on a three-point scale. The justifiable (possible) number of research credits in a given semester must be calculated on the basis of the other two credits (supplemented to a minimum of 30). Consequently, the number of required research credit points in the four-year training period, depend on the other two types of credits.

#### Educational credit:

The state-funded doctoral student can earn *lecturing* credits through their educational activity. The number of hours that a state-funded doctoral student may hold may not exceed 2 hours per week on average. 2 educational credits can be obtained per contact hour / week for educational activity, i.e. a maximum of 4 credits can be earned per semester for the maximum possible educational activity. The number of educational credits during the entire training cycle may not exceed 12, for those establishing a student status after 1 September 2016, 16 points. Educational credits should be included in the e-gradebook (transcript). The head of the department (head of the doctoral programme or Head of the DI) shall certify the performance.